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SCHOOL AND SOCIETY

Volume VI SATURDAY, AUGUST 18, 1917 Number 138

THE READJUSTMENT OF THE STATE NORMAL SCHOOL[1]

ONE of the important problems confronting every state at the present time, in the administration of its system of public education, is that of securing a sufficient supply of adequately trained teachers for both elementary and secondary schools. For this reason the proper organization of teacher-training agencies, the content of courses of study for these institutions, the relationship of state normal schools to departments of education in colleges and universities and similar problems have come to the front in the last few years as leading problems of state educational administration. These are problems which may well engage the serious attention of thoughtful educators.

A new science of teaching is rapidly emerging from the traditionalism and the rule-of-thumb procedure of the past. This new pedagogy is characterized by the principles of scientific management. Opinions, beliefs and faiths are rapidly vanishing and the arbitrament of definite objective facts and verifiable data is taking their place. Every method of procedure in use in the schools as well as the entire content of education is under the necessity of justifying itself by proving that it has a demonstrable foundation and is capable of producing definite effects of value upon the pupils. It is natural that the presence of this scientific attitude should produce important readjustments in almost every phase of education and lead to reorganization in many important respects.

This readjustment involves new conceptions of the educative process, the teaching of new subjects not previously in the course of study, new emphasis upon the administration of various activities, such as that of supervised study, the use of scientific methods of measurement of achievement on the part of pupils, renewed stress upon adequate provision for the health of school children and similar matters. Corresponding readjustments in teacher-training institutions are demanded by the changes which are taking place in the method and content of education. The new conditions which have arisen require the addition to the force of many teachers who are trained for the new lines of work, for the new types of schools and for the new methods which are being introduced, as an essential to the most satisfactory educational progress. It will be found to be somewhat difficult to introduce new methods of teaching, new types of organization and new activities by persuading teachers who have been in the service for a decade or more to accept them, to adapt themselves to them and to apply

[1] Address delivered before the Scholia Club, Boston, Mass., January 25, 1917. The writer, for the past four years, has been assigned to the duties of inspector of state normal schools for the New Hampshire Department of Public Instruction, and during this time he has made a detailed survey of each of these schools in the state from three to six times a year, as well as an examination of the available literature relating to normal schools. This paper summarizes his convictions after this prolonged study. On account of lack of space many dogmatic assertions have been made without supporting arguments or facts. This has been done purposely for the reason that the paper was written to be discussed. One of its main objects was to set forth various proposals for consideration by the club.

them. In the first place such new movements and changes often involve new conceptions of the educative process with which these teachers did not become familiar when they received their training. A change of point of view, therefore, is necessary on their part. This is often a difficult thing to make. Again to understand thoroughly a new method or a change in organization would ordinarily involve reading a good many current magazine articles and recent monographs, thorough study of several books, attendance at some lectures and a good deal of time spent in working out details in teachers' meetings. Teachers are busy people. They tend to become conservative. It is often very difficult, therefore, to induce them to make the effort to understand thoroughly new movements in education or to be willing to make a sufficiently prolonged and sympathetic trial of them.

All of this applies especially to new methods of teaching in which there are destined to be important developments as education becomes a more scientific process, and to administrative changes like that of the introduction of the junior high school. To make this entirely successful will necessitate a thorough understanding, on the part of teachers, of the significance of the movement and the fundamental principles on which it is based. One of the most difficult problems connected with this particular change is to get sufficient teachers who understand the spirit in which the new subjects in this department should be taught and the content appropriate for children of this age. I wish to use here a single illustration. In the New Hampshire junior-high-school courses, concrete geometry appears in the seventh grade. To teach this in the same way and to select the same subject-matter as now prevail in the teaching of geometry in the second year of the high school, as an abstract deductive science with its ancient Greek content, would be highly inappropriate. For these reasons, my statement that there is a real need at the present time for a supply of teachers trained in the new science of teaching and the new school management is justified.

It has often happened that those in charge of the administration of a state system of education have been convinced that certain lines of procedure in teaching, or certain aspects of program-content, or certain forms of organization are superior to those in use in the schools. They have realized, however, the entire futility of attempting their introduction on account of the certain failure of teachers in their application. One illustration here will suffice. In New Hampshire a new method of teaching Latin has been in use in a few secondary schools for about a decade and by actual measurement of results by scientific methods it has demonstrated its superiority over the plan in common use. The state department of education has not advocated its adoption on a state-wide scale for the reason that in the hands of the present high-school teachers of Latin it would be a blank failure on account of their unsympathetic attitude and lack of pedagogical training. Here is an example of a method of procedure of demonstrated superiority which can not be put into universal operation on account of a lack of properly trained teachers. Educational progress is thus retarded.

This particular problem of the teaching of Latin, like others of its kind, can be solved on a state-wide scale only by the training of new teachers. The state which I represent is attacking it in this manner. One of the state normal schools in New Hampshire has a well-organized junior high school of three hundred and fifty pupils as a part of its training school and the department of education of this normal school

gives a course in the teaching of Latin, with ample opportunities for practise in the junior high school. The instructor who has charge of the class in the method of teaching Latin in the normal school also teaches the subject in the junior high school. The members of the normal school class have constant opportunities for practise in connection with their study of theory. As soon as a student develops sufficient capacity to teach successfully, he is given daily practise until he becomes proficient. These students will go out and become efficient teachers of Latin under the new method. Through them the reorganization of instruction in this subject will be brought about in an effective manner, so far as the number of such teachers permits.

The foregoing illustrates an important principle and emphasizes the importance, for educational progress, of teacher-training facilities in each state, adequate both in number and in the character of the work which they offer.

There are many unsolved problems in connection with this question of securing a sufficient supply of properly trained teachers. What fundamental aims should govern the work of the normal schools? Of what should the content of the professional courses consist? What is the best method of conducting practise teaching? How much academic work, such as Latin or physics or chemistry, if any, should be offered in courses planned for training elementary teachers? How long should the course be? Should college departments of education train elementary school teachers? Should state normal schools train high-school teachers? These are a few of the questions upon which there is not complete agreement and which furnish debatable issues in the field of teacher-training. The existence of these problems and the importance for educational progress of establishing teacher-training institutions on a sound basis make this question one which is well worthy of our serious consideration. I believe that the problem of the adequate and proper training of teachers is one of the most fundamental in American educational administration at the present time and one upon which educational progress in a very large measure depends.

It is the purpose in the time which is left to discuss certain aspects of the training of teachers with special reference to the work of state normal schools under the special conditions which prevail in the New England states. I shall take the liberty of making certain specific references to New Hampshire conditions for the purpose of illustrating certain statements. I do not do this in the belief that our conditions are superior to those in other states but for the purpose of making what I say concrete and definite.

That the aim of a state normal school should be to train teachers for effective service in the public schools of the state, no one here will deny. It is, then, primarily a school of education. That its field should be limited to preparation for teaching in schools below the grade of senior high schools has long been the accepted policy in New England. It is argued that it should not seek to enter the field of the university department of education and that it should not attempt to become a teachers' college in the sense of training teachers for the advanced grades of secondary schools, or for administrative positions such as principals of secondary schools and superintendents of schools. It is obvious that it should not take on exclusively the characteristics of the seminary or academy and give its whole attention to courses in liberal arts studies which do not have special reference to teaching, such as Latin, chemistry, geology, general history and similar studies. I believe that the state normal school has a dis-

tinct field of its own and that it should be practical and aim at a high degree of efficiency in its special field.

The precise nature and scope of the facilities for training teachers in any state must depend upon certain clearly defined principles, which I now wish to discuss briefly. The number and character of teacher-training institutions which are required in each state must be decided with strict reference to the known needs of the state which is to be served. It is entirely possible that these requirements may vary greatly in different states, which may lead to the necessity for entirely different plans for organizing normal schools and, in fact, very different types of such schools. The fundamental question upon which the decision must be made is: What number and what kind of new teachers are needed annually in the state to recruit the force? Experience indicates that this number remains reasonably constant year after year. I can best make clear my point here by using my own state again as a specific illustration. New Hampshire needs about three hundred and fifty new elementary teachers and it would need approximately seventy-five new secondary teachers each year if we had facilities for training them all, or an equivalent number, in the state, thus insuring a reasonably permanent force. The plan for training teachers in New Hampshire must, then, contemplate the establishment, in addition to the already existing agencies, of institutions sufficient in number and of such a character as to supply this number of trained teachers. The aim is that the state shall raise, educate and train annually a force of teachers equivalent to the number of recruits required each year. It is, of course, desirable that some of these should go to other states in exchange for teachers from outside of New Hampshire. If there are now, however, or in immediate prospect, sufficient colleges in the state with departments of education to provide the necessary number of high-school teachers, the state would not be justified in providing facilities for training teachers of secondary schools in its normal schools, especially since these schools can now provide only half the required number of elementary-school teachers. To do so would be a gross waste of public funds, for the state would be spending money to provide what it already has and failing to furnish what it greatly needs. On the other hand, in a state in which no such facilities for training secondary teachers are found, and in which none are easily available from outside, the establishment of one or more state normal colleges for this purpose is not only desirable but imperative.

Now, the actual fact is that in New Hampshire and the other New England states no such normal colleges are needed, for the reason that this section has an abundance of high-grade colleges and universities—most of which now have departments of education for professional training of high-school teachers—on account of which there is an abundant supply of secondary-school teachers for the older high-school subjects, although very many of them are still quite largely without professional training. There are, moreover, in existence in New England, institutions of collegiate grade in sufficient numbers, if developed along proper lines, to provide all the high-school teachers of all kinds necessary for all time. Therefore, a state normal college for training secondary-school teachers is an institution which is not needed in these states.

I can understand, however, that in other parts of the country there are large sections supplied with few, and in some cases no, colleges or universities. In these regions there is a need of strong, well-equipped institutions of the grade of state

normal colleges with two-, three- and four-year courses for the training of both elementary and secondary teachers. This whole matter may be summed up by the statement that in every state there should be established, in addition to institutions already existing, enough state normal schools and state normal colleges, in the right proportion, to provide the number of new elementary and secondary teachers required annually in that state under normal conditions, *i. e.*, when the state is equipped to raise, educate and train a sufficient supply of teachers for all of its schools.

At the present time, in New England at least, a two-year course seems to be the prevailing length of time devoted to the preparation of teachers for the first six grades. Three years are thought necessary to fit people to teach in the seventh and eighth grades, which now constitute the junior high school, or a part of it, for which it seems clear that the state normal schools for the present must do an important part in preparing the teachers. It is my belief that the immediate future must see the extension of the normal-school course in New England to three years for teachers in the first six grades and to four years for preparation for teaching in the junior high school. This requirement of four years will doubtless be extended in the not too distant future to all teachers above the primary grades. It is my hope that the profession of teaching will eventually be so magnified and so rewarded that a minimum of four years of professional training may be demanded of all who seek to enter its ranks.

It is impossible to consider most profitably what should be the desirable characteristics of institutions for the training of teachers, what should be the nature of the courses in such institutions, what methods should be employed and what kind of instructors are needed, until a trained teacher has been defined. It is necessary, then, to ask: What are the characteristics of such an individual? There are at least four essential qualifications of the trained teacher without which it is impossible to lay claim to being trained in the real sense of the term.

1. *The teacher must be a person of sound scholarship within the range of his work.* Most young elementary teachers, even though they are recent graduates of state normal schools, do not meet this requirement. They are usually persons of extremely superficial scholarship. Their knowledge of the larger relationships of such subjects as geography, history and elementary science is in most cases extremely meager. The teacher needs to have not only a broad and thorough knowledge of the subjects which he teaches but also of related subjects. A teacher of elementary science, for example, needs some acquaintance with geology, meteorology, mineralogy, botany, zoology and astronomy for his own proper orientation and grasp of his subject, although he will not teach all that he knows. The teacher of reading should have a working familiarity with the whole field of children's literature. The teacher of history in any of the lower grades must have a good command of the facts of the history of our own country far beyond that which he expects to teach, as well as considerable familiarity with the history of other nations. Extensive experience with graduates of many different normal schools convinces me that one of the chief sources of failure of young elementary school teachers is their lack of scholarship. I have seen young women with good intelligence and excellent training, but with such a weak grasp of the subject-matter and relationships of the subjects which they were supposed to teach that their instruction was weak and flabby. They lacked just the element of good scholarship to make good

teachers. The public has a right to demand more in this respect than it is now getting. The time has come when the state normal schools must remedy this defect in their graduates if they are to continue to serve the public in an entirely satisfactory manner.

2. *The teacher needs a knowledge of the facts concerning the mental processes of children and the laws of their growth and development.* Such knowledge as the teacher would get in a somewhat elementary study, with the material judiciously chosen, of significant individual differences in children, the process of habit formation, the development of original behavior through growth and experience, the laws of fatigue, the psychological characteristics of children at various levels of development, the laws of efficient and economical learning and similar topics furnishes him with information for understanding child nature and gives him an absolutely essential basis for professional capacity, adaptability, growth and self-direction in teaching—qualities which constitute the difference between the trained teacher and the teacher who is guided in his work by a few rule-of-thumb methods, of which he has little or no real understanding. Such knowledge is capable of rendering valuable service to him if it is so taught that it bears a functional relationship to his actual work in the school-room. It may be stated as a fundamental principle, then, that without some knowledge of the facts of educational psychology the teacher can not be most efficient.

3. *The third essential of a trained teacher is an intimate knowledge of the best methods of teaching so far as they have been established up to the present time.* Of course I am aware of the fact that teaching is still in the experimental stage and that a final and entirely valid pedagogy has not yet been established. On the other hand, we do have a good deal of knowledge in most subjects and very definite knowledge in a number, concerning methods of procedure in teaching which we know are effective. Conclusions have been experimentally determined in the school-room. Recent work in the measurement of results of teaching and scientific evaluation of different kinds of procedure by experimental methods have given us facts concerning educational processes of various kinds and have enabled us to determine with considerable definiteness what procedure is most economical and most efficient. In the last three or four years we have been able to formulate new methods in accordance with scientific facts. Although improvements are sure to be made, we now have a technique of instruction in such subjects as reading, spelling, handwriting and arithmetic which can be classed as scientific. We have a reasonably adequate scientific technique of drill. We know how to secure adequate motivation in most subjects. A good deal of progress has been made in finding out effective ways in which to teach pupils how to study. The problem of effective teaching is being brought yearly nearer and nearer to a solution by formulating better and better methods as information emerges to throw light upon the nature of the learning process with which teaching is so closely connected that the two can not be easily separated. The time has come when the trained teacher must have an intimate knowledge of some of these things. Instruction in these matters in the past has been far from adequate.

4. *The teacher needs to know a good deal about the best methods of school organization and management.* This subject is coming to mean more than learning out of a book a few maxims about conducting schools. A modern course in school organization and management in a state normal school should certainly include a study

of such topics as acceleration, retardation, elimination and age-grade statistics; the hygiene of study; the educational value of play and athletics and the conduct of the different forms of physical education; the factor of fatigue in the distribution of subjects; time apportionments; the use of standard tests, and many other similar topics. Elementary-school teachers, as at present trained, are ignorant of most of these things. The superintendent who desires to put into operation in his schools modern methods of supervision too often finds that he has a teaching force which has no conception of the meaning of many things with which he wishes that they had become familiar in the normal school.

On the basis of these essentials it is possible to state with some definiteness the main aims of normal-school training as conceived in New England. There are three chief objectives which summarize what a state normal school should do for its graduates. These are: (1) to broaden the scholarship of the prospective teacher within the field of his specific work; (2) to develop childsense, professional capacity, educational intelligence and adaptability through the study of child psychology, principles of elementary education, educational sociology, school organization and management and similar studies; (3) to develop school sense and specific ability to teach effectively in the elementary and junior high schools, through observation of excellent teaching in the training school and through actual teaching under the supervision of competent and experienced critic teachers. Experience indicates clearly that all three of these factors are necessary if the highest efficiency is to be attained.

A recent report[2] by the American Psychological Association on the status of psychology in normal schools pointed out that this subject was especially unsatisfactory in New England schools. Probably most of us would agree with the criticisms made by this committee and we should be disposed to extend the criticism to the other professional subjects. I doubt if there is any one here, even principals of normal schools themselves, who would go so far as to assert that present normal-school courses in either psychology or education are entirely satisfactory. This implies no criticism of these schools. They have performed a worthy work in the past. They have been characterized by a spirit of service and devotion which has been commendable. The problem now, however, is of the future. With education in a process of rapid transition no educational institution, however worthy its past may have been, can continue to serve the public needs in a thorough and efficient manner without undergoing readjustment in fundamental particulars. Just this is the present problem of the state normal school, as I see it. It is essentially a problem of readjustment.

The subjects in the ideal normal-school course of study are naturally divided into three groups: (1) the professional studies; (2) studies the aim of which is to broaden scholarship; (3) studies which deal with the material of the course of study appropriate to each grade in the school system, its proper organization for presentation, its place in the school curriculum, and incidentally, the method of teaching to which it is best adapted.

The studies of all three of these groups should probably appear in both years, but the predominant emphasis in the first year of a two-year course should be upon the studies the purpose of which is to broaden scholarship and in the second year upon the professional subjects. It is believed to be a fundamentally wrong principle to

[2] Washburn, Margaret F., and Baldwin, B. T., "The Academic Status of Psychology in the Normal Schools," Report of the American Psychological Association.

teach, in the first year, a large amount of the theory of education in the abstract and then expect the students to apply it in their practise teaching which usually comes in the next year. Most people now agree that it is a principle of economical learning in the mastery of any art, first to acquire some facility in practising the rudiments of it purely as an art before studying the science upon which it is based. Many normal schools, however, violate this principle by giving in the first year, to young high-school graduates, the most of whom have never taught and who have scarcely even been inside of an elementary school since they were pupils, detailed theoretical courses in special methods of teaching the various studies of the elementary curriculum. This is often for the purpose of exploiting some special method or hobby in which the school believes. Courses of this kind are uneconomical and wasteful. In a large measure they are meaningless to the pupils. Experience has convinced me that they are radically out of place.

As a substitute for the present form of organization, I wish to discuss a plan which I believe to be capable of producing more satisfactory results.

It has been pointed out that one of the great weaknesses of state normal-school graduates is their lack of scholarship. It is inevitable that this should be so. The normal schools for this reason must give some courses in subject-matter for the purpose of giving a rich background of scholarship to the prospective teachers in the subjects in which they will give instruction in the schools. There should be strong courses dealing with the subject-matter of all such studies as history, civics, elementary science, children's literature, geography and nature study. This does not mean a review of grammar-school work. It means a new type, of course. These subject-matter courses should come in the first year and should serve to give the students a breadth and richness of scholarship and appreciation considerably beyond what they expect to teach. The progressive normal school can do constructive work of a valuable type in mapping out and formulating the material of courses of this kind.

There should be also a consideration of subject-matter, during this first year in these same courses, from another point of view. The aim here should be the discovery and organization of the material of the course of study of the schools with some consideration, in an introductory way, of methods of teaching. Only after the development of the broader and richer scholarship which these studies have produced, are the students well qualified for work of this kind. In this work the students will become thoroughly familiar with subject-matter to be taught in each grade in school. Such topics will be considered in connection with each study as minimum essentials, relative values of various aspects of subject-matter, proper objectives and standards of attainment in each year, the specific material appropriate to each grade, preparation of the detailed material as it would be taught to the children in connection with various topics, selection of appropriate topics, adaptation of subject-matter to children of various planes of maturity.

It seems to be an accepted principle among educators that a course in psychology is a desirable preliminary to further professional study in preparation for teaching. It is evident, then, that one of the important problems of the state normal school is to organize a course in psychology elementary enough to be comprehended by people of the grade of first-year normal-school students and so applicable to the elementary school that it may have a definite bearing on school-room practise in teaching and in the management of pupils.

The normal schools of the New England states have been slow in solving this problem. There is sufficient material for a profitable course in normal-school psychology, but it is doubtful if there are more than three or four normal schools in this section which have organized the material available in this field in as satisfactory a manner as it may be and ought to be organized.

The course in psychology in the New Hampshire normal schools has recently been reorganized and may be suggestive. In this course an attempt is made to select, organize and present some of the more significant elementary facts of the psychology which underlies the educational practise of the elementary school. A brief scientific account is given of some of the main factors in the physical and mental growth and development of normal children in the preadolescent period which have a bearing on methods of teaching and school management, and which will enable the teacher to deal more intelligently and more effectively with children. An analysis of the mental processes involved in learning the various school subjects is made. The significance of the facts in relation to the method and subject-matter of education is considered. A year's work is given in the first year, and the subject-matter is organized under the following heads: I. *The Psychology of Child Development.* This includes a study of such topics as the physical growth and development of the child, the native equipment of the child in instincts and impulses as the basis for education, the modification of original nature through growth and experience, linguistic development in children, significance of the instinct of physical activity in young children. II. *General Educational Psychology.* In this part of the course is taken up a brief and elementary study of such topics as habit, memory, mental discipline and transfer of training, mental work and fatigue, the learning process in children, individual differences and the conservation of individuality. III. *The Psychology of the Elementary-school Subjects.* This consists of an analysis of the mental processes involved in reading, spelling, handwriting, arithmetic, music, drawing, geography, history and similar subjects.

It is felt that this course in psychology does two things: (1) It gives the prospective teachers in some degree a scientific basis for understanding the principles and practise of teaching and school management. (2) It functions in the direction of greater professional intelligence. The content of the course is so selected that it bears an intimate relationship to the teacher's actual work. It is entirely possible for a great deal of it to be taught through actual observation and study of children. For example, individual differences in ability to learn may be demonstrated by having the class follow the learning of some subject by a group of pupils in the training school and make observations upon different pupils. Habit formation may be studied by observation of a class of beginners learning to write. Simple tests of transfer of training may be made. Of course there should be lectures, reference reading, class discussions, reports on special topics as well as actual observation of the mental processes of children in the schoolroom learning. This course should be given in the first year together with the courses in subject-matter, in a two-year normal course.

The question might arise here. Are young normal-school students capable of securing a competent understanding of such subjects as these? The experience which I have had as an inspector of state normal schools leads me to answer emphatically that they are. Not long ago I was present in a normal-school class in psychology in which an

entire period was spent by a student in reciting upon the topic of individual differences, in which she gave an interesting, intelligent and competent review of the subject, which showed an adequate mastery of what Thorndike has written about it as well as other literature. A second period was spent by the class discussing the same topic, in which a remarkable understanding of it was evident. At another time a young lady in the same school gave an intelligent recitation, taking an entire period for it, on Meumann's chapters on associative learning. The class showed an equally good mastery of the subject. At still another time a student, to whom the psychology of reading had been assigned as a special topic, presented to the class in lecture form an excellent survey of the facts including a good report on Dearborn's monograph and Huey's results. Observation of a good deal of work of this kind has convinced me of the possibility of effectively teaching a course of this kind.

In addition to the psychology, the New Hampshire normal schools give in the second year a course entitled *Standards and Measurements in Elementary Education.* In this the students learn the use of a number of the more important scales and tests by the application of them to children in the training school. They study, in connection with the actual use of the tests, the more elementary aspects of the theory of educational measurements and they become familiar, in the same way, with the tabulating and the graphing of the results. This course is of great value to the teachers when they go out into school systems where modern methods of supervision through educational measurements and diagnosis are in use. The topics considered in the course are as follows: recent developments in testing the results of teaching; the meaning and purpose of standards in education; methods of deriving standards; specific consideration of standards and measures which have already been derived; elementary discussion of the theory and practise of experimental and statistical methods of measuring efficiency in reading, handwriting, spelling, English composition and arithmetic; practical application of the results of educational measurements to the pedagogy of the elementary school.

The efficient state normal school will have in addition to the courses discussed above a course running through the second year, if the course is limited to two years, which will deal with the specific principles and methods of elementary education, but this will not be like most of the present courses in this subject, many of which are formal, abstract, theoretical and not related to the actual types of teaching now done in the schools. In some cases this is true to such a degree that the students who graduate from the normal school are not properly fitted to play their part in a reorganized and vitalized school system. Most of them have to be retrained after they get into their work, provided they go into school systems which are in the forefront as regards modern methods of procedure in teaching.

Just as there is a new science of teaching, so there should be a new type of normal-school course dealing with its principles. This course should consist of two parts. The first part should deal with the general principles of educational practise applicable to the elementary school. Here the students should learn how to make school work purposeful and significant to the children through adequate motivation, to which we have given altogether too little attention. They should learn the best methods of teaching pupils how to study. They should be made familiar with the principles and practise of the new type of drill which has come into the schools and which is based on scientific facts. These and similar topics

should constitute the content of this aspect of the course. Everything here should be related to actual situations connected with real school work. All that is merely theoretical should be excluded. The second part of this course should deal with the specific pedagogy of the elementary-school subjects. Progress is taking place rapidly under the stress of the recent scientific evaluation and appraisal of school methods and processes, in the teaching of such subjects as reading, spelling, arithmetic, handwriting, history and geography. It is now demanded that the work of these subjects be demonstrably efficient. This has resulted in an almost complete rebuilding of practise in these subjects with the result that they represent in a conspicuous manner the new science of teaching. The aim of this course should be to put the prospective teacher into possession of a knowledge of the best known scientific principles in this field and to give him skill in application of them in teaching. It is very rare to find teachers in any considerable number at the present time, even in the best school systems, who have an adequate command of the technique of modern teaching. Enough teachers of this kind can be found, however, under enterprising, progressive and competent superintendents to prove that it is possible for all. Those who do have a competent grasp of the new pedagogy usually have it because they have been trained in service by progressive superintendents who understand the new supervision.

Such a course as I have just mentioned is now being given in the New Hampshire normal schools. In this course an attempt is made to formulate the pedagogy of the elementary school on a scientific basis so far as possible at the present time. The State Program of Studies for the Elementary Schools of New Hampshire is in constant use as a reference book. The subject-matter to be considered is organized under the following heads: I. *The Problem of Aim in Elementary Education.* The meaning of education; social needs to be met by the elementary school; the nature and scope of the work of the elementary school; consideration of the composite aim and the various specific aims in elementary education. II. *General Principles of Educational Practise Applicable to the Elementary School.* The following are the main topics which receive attention in this part of the course: the motivation of school work; economy of time in the elementary school; teaching pupils how to study; the principles and practise of drill; essential steps in teaching corresponding to appropriate aspects of the learning process; principles governing the selection of subject-matter; the recitation. III. *The Specific Methodology of the Elementary School.* Discussion of the teaching of the elementary-school subjects such as reading, spelling, handwriting, arithmetic, geography, history, language, literature, nature study and similar subjects. The aim is to familiarize the teacher with the best known scientific principles underlying the teaching of these branches.

You will all agree with me, I am sure, that this course has not been satisfactory when taught in the traditional way—entirely by lectures, assigned reading in books on pedagogy, recitations and written examinations, although all of these should play a part. I desire, therefore, at this point to discuss this matter somewhat in detail.

There should be of course in connection with every state normal school a training school with adequate practise facilities. This school should be an important factor in connection with this course. The principles of teaching should be learned largely by purposeful activities—by actual application of them in teaching. Experience

indicates that a very large part of the teaching in the training school can be done by the normal-school students, with practically no loss of efficiency, if the work is properly organized and handled. There should be in the training school a sufficient supply of critic teachers of especial ability. They should be the strongest teachers who can be found in the state and they should receive high enough salaries to retain their services from year to year. The normal-school students should learn to teach under their direction. They should first acquire some facility in teaching purely as an art. This teaching should begin in the first year with one or two pupils, after some weeks of observation of the teaching of the critic teachers. The number of pupils in the groups taught by the normal-school students should gradually increase during the year to three or four, or half a dozen. A half hour or an hour a day may be devoted to this kind of work and it will prove of the utmost value in enabling the students in their second year to understand and to profit from their instruction. There should of course be regular class periods devoted to discussion of what is observed in the training school. These should follow every observation period and should result in definite growth in understanding of principles on the part of the students.

The work in the training school is the most important single factor in the training of teachers. The young student-teachers should have much opportunity to observe high-grade teaching and much opportunity to practise under the close supervision of critic teachers. They should observe, discuss, practise, observe again, discuss again and practise again, under the direction of critic teachers and instructors, until the ability to teach effectively and manage a school properly has been attained. After sufficient ability to teach has been developed the student-teachers should take full charge of rooms and classes as in actual school work.

The force of critic teachers and the whole plan of practise teaching should be under the direction of a director of training who should organize the critic teachers into a force of supervisors and assign to each a group of student-teachers while he himself exercises a careful supervision over their work and organizes and directs the entire work of the training school.

In this plan the student-teachers will study their pedagogy, school organization and management and content of the school program at the time that they are doing their practise teaching. The time in the senior year of a two-year course should be about equally divided between teaching and professional study of this kind. In a three-year course a somewhat larger proportion of the time of the last year may be devoted to teaching. Under this plan much less class study of special methods of teaching will be found to be necessary, for the reason that the student-teachers will be taught how to teach by the critic teachers under whom they work. This is the plan followed in hospital training schools which, I believe, are more effective in their training than are normal schools. The professional study which normal students do should be of a vastly more scientific type than the mere drill in special methods too often found in these courses.

School organization and management should be taught in the same way. Instead of a theoretical text-book study of the subject previous to the beginning of practise teaching, it should take the form of learning how to manage a school by being constantly in a good school and by participating in its management. In other words, the content of the course should be based entirely upon the actual problems met by the students in their teaching. Only so, can it be made vital and most effective.

Too often this course is of almost no value for the reason that it is taught entirely from a text-book by an instructor in the normal school who is far from familiar with what modern schools really are. It is thus a thing apart from actual school practise and the students find, when they go out into the real work of teaching, that what they have been taught bears little relation to what they are required to do. More effective work will be done if students learn what they need to know about retardation and elimination by making first-hand studies of these problems in connection with the schools in which they teach. They should study school hygiene and sanitation by actually carrying on the activities which are provided for promoting the health of the children in the schools of which they are in charge. Familiarity with methods of marking and record keeping should be gained by the actual doing of these things in the school-room. In other words, the greater part of the course in school organization and management should take the form of actual contact with the problems of the school-room with which such a course should be concerned. This course should be in charge of the director of training. The class may profitably meet once or twice a week for class discussion.

Many people believe that the right kind of a course in educational sociology has a definite place in the state normal school. With this idea you are doubtless in hearty agreement. The chief problem now is to standardize the course. Time forbids going into the details of this problem. Such a course is now being given in the New Hampshire state normal schools. It is offered in the senior year and extends through a half year. The course is divided into three parts as follows: (1) study of dependent, defective and delinquent classes and corrective laws and institutions, with special reference to New Hampshire conditions; (2) study of race history and social conditions of race elements of the New Hampshire population; (3) consideration of the social justification of the different subjects in the program. This is made real by study and observation in the practise schools and in the communities in which the normal schools are located. Last year a class in one of the normal schools, in connection with this course, carried out a rather elaborate experimental investigation of the social value of the different aspects of arithmetic. Of course the content of such a course is yet in the experimental stage, but even in its present imperfect form it is believed, by those who are familiar with the work of students who have taken it, that it functions in an increased professional intelligence on the part of normal-school graduates, which is a valuable part of their equipment.

I am convinced that the program which I have outlined so far can not be carried out most effectively in a two-year course, although I have mapped it out on that basis. Three years are desirable. A year and a half is needed for each year's work as suggested.

The further training of teachers after they have begun actual service in the schools is one of the very important problems connected with securing an adequate supply of properly trained teachers. The mere completion of a good normal-school course will no longer prove sufficient. Teachers must grow. As educational practise changes so must they make adjustments to the new conditions which are continually arising. You are all familiar with the suggestions of a recent member of this club along this line,[3] to the effect that teach-

[3] Snedden, David, "The After-training of Teachers," *Educational Administration and Supervision*, Vol. II., pp. 401–402. See also Seventy-ninth Annual Report of the Massachusetts Board of Education, pp. 73–74.

ers be employed for twelve months each year with two weeks of incidental vacation during the year and a month in the summer with the requirement that young teachers spend six weeks in the summer in further advanced professional study. For a number of years I have felt that the organization of the necessary summer courses for these teachers constitutes one of the most important parts of the work of normal schools. This will require that normal-school faculties be employed for twelve-month years also, with brief vacations of a month or six weeks, of course, at some time during the year. These requirements should be accompanied by proper salary increases. Under this plan as suggested, older teachers are to spend some time in vacation teaching, or travel, or in summer camps, or other forms of professional self-improvement.

I am sure that you agree with me that this idea is worthy of the highest commendation and that its fulfillment is an important part of the needed readjustment of the state normal school. Many other forms of after-training of teachers are highly desirable, such as extension lectures given regularly at appointed centers by faculty members, conduct of teachers' institutes, Saturday and evening courses for teachers, visitation by faculty members and similar activities.

A feeling has been voiced recently to the effect that state normal schools as institutions have shown little intellectual vigor by contributing, in as large a measure as they ought, to educational advancement. There is a reason for this. They have been busy training teachers for the schools and they have devoted their whole energy to the Starch tests, we may assume that a 100-word task. You will agree with me, however, that there may be some ground for criticism along this line. Productive studies such as formulating courses of study, organizing program material, testing its applicability in the training school, the development of new tests and scales for measurement of school achievement, the critical appraisal of plans of measurement now in use, careful descriptions of methods of teaching which have been tested in the classroom and found effective have not come from normal-school faculties to the extent to which they might be expected. A normal school in charge of a principal who is a professionally trained educator with a staff of competent and trained teachers ought to be able to do more in building up and testing a body of valuable educational experience than any other school system in the state. It ought to be possible to carry out experiments under control for the purpose of evaluating different types of instruction. The training school of a state normal school ought to be an educational laboratory. No one here, however, would argue that state normal schools in this part of the country at least are now doing these things in as effective a way as they are destined to in the future.

Much misapprehension has arisen in recent years concerning the most desirable qualifications for teachers of education. I shall consider this question only from the point of view of the state normal school. There is no evidence whatever that young men or young women with advanced degrees in education from colleges and universities, but with little or no experience in teaching, are satisfactory normal-school teachers. Opportunities to observe the work of many such teachers convinces me that they fail to teach effectively. They have little conception of what real schoolroom work is like. In a word, they have no school sense. The same thing is true of a considerable number of the younger men and women who are teaching the theory of education to-day in our colleges and universities. Lacking this school

sense, which can be acquired only by a number of years of actual contact with elementary and secondary schools, they fail to give a type of instruction which possesses vitality and which is applicable to actual school conditions. Normal-school teachers must be school-men and school-women. The principalship of a state normal school requires a practical man, who is thoroughly familiar with schools, who has administrative ability, educational ability, vision and the capacity to supervise a faculty, maintaining at the same time harmonious as well as effective relations with the members. Some normal-school principals lack supervisory and educational ability in too large a measure. For the position of teacher of education or director of training in a state normal school, a satisfactory person is a man or a woman who has served for a number of years as teacher and principal, preferably in elementary schools—in New England as superintendent in a supervisory district, perhaps—and who has had two years of advanced graduate work in education in some good university or its full equivalent. He must be both a school-man with school sense and also a trained educator. Such a man is of course worth $4,000. The position which he holds, however, merits that salary in its importance and in its value to the progress of public education in the state. For instructors and critic teachers, women who are normal-school graduates, who have had five or six years of experience in public-school work, who have demonstrated superior capacity to teach and who have taken two or more years of advanced university training in education, possess satisfactory qualifications. These teachers should be people who have the point of view of the schools combined with advanced technical training in education.

Three statements will now summarize the chief needs of state normal schools. (1) Their courses are in need of reorganization to meet the demands of the new science of teaching which is rapidly developing. (2) Their faculties need to be made up more largely than at present of school-men and school-women who have added advanced technical training in education to successful experience as teachers. (3) They need to take positions of leadership in the new scientific spirit which characterizes modern education.

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JUNIOR FARM RECRUITS OF NEW JERSEY

As soon as war was declared and the danger of food shortage became apparent, the educational authorities of New Jersey, at the request of the governor, prepared to utilize the machinery of the public schools by enabling the children of the state to assist in increasing production. A Junior Industrial Army was organized in three general divisions, Agriculture, Home Gardens and Girls' Service. Although nearly 60,000 boys and girls are registered in the Home Gardens Division, and canning and Red Cross sewing have been started by the Girls' Service Division, the work of the Agricultural Division is most significant, because for this activity children have been excused from attending school.

Any boy fourteen years of age or over who is in good physical condition and has the permission of his parents may enroll and leave school for agricultural work either on his home farm or elsewhere. Boys thus employed are not considered "absent" from school, but "excused," and they receive full credit for the school work which they would have done during this time. For the purpose of the administra-

tion of the school fund, part of which is apportioned on the basis of total days attendance, these boys are considered present. The work in each county is in charge of the county superintendent of schools. A record of the name, age, grade, date of enlistment and place of employment of each "recruit" is kept by him, and each boy is given a numbered badge which becomes his property on the successful completion of his work. For the most part the positions are secured through the principals and teachers of the schools, who receive applications from farmers or learn of places through friends or through personal investigation. At the end of May the State Department reported that 6,332 boys had already begun farm work and that 2,722 others were available. Only eight counties had reported in detail to the state office at that time and an examination of the 821 record cards sent in by these counties showed that 258, or 31.5 per cent. of the boys were over sixteen, 17.4 per cent., were sixteen, and 51.1 per cent. were under sixteen. Of this 51.1 per cent., 2.4 per cent. were under fourteen. Of the 561 boys sixteen years and under, about 61 per cent. were working on farms owned by their parents or rela ives, 24 per cent. were living at home and working on farms in their neighborhood, 14 per cent. were "hired out," and 1 per cent. were employed in a farm implement factory.

As the work has progressed and the different counties have devised various plans for furthering it, three general lines of development have become apparent: first, the organization of boys' camps, on an estate or large plot of ground secured for this purpose, where the boys live and work; second, the establishment of "camps" where the boys live, going out daily to farms in the vicinity; and third, the employment of individual boys by individual farmers. When the work is not done by groups on a cooperative basis, the wages are adjusted by direct agreement between the boy and his employer.

The best instance of the first of these projects is the Froh-Heim Farm Club, situated on the 4,000-acre estate of Grant B. Schley at Far Hills, and under the management of the Y. M. C. A. Mr. Schley advanced $20,000 and on April 30 58 boys, ranging from fourteen to twenty years of age, recruited from the Plainfield, Bloomfield and South Orange high schools, began to plant an 80-acre vegetable farm. Two agricultural leaders from Rutgers College have direction of the farm work, and a Y. M. C. A. secretary has general supervision of the camp life of the boys. The average age of the boys is sixteen, and the average weight 137 pounds. Their daily program is as follows:

4:45 Colors.
5:00 Breakfast.
6:15 Inspection of bunks.
6:30 Drill.
7:15 Farm duty.
11:00 Lunch (served in the field).
12:00 Farm duty.
5:00 Recall.
5:30 Dinner in uniform.
6:15 Drill.
6:45 Sunset.
7:00 Recall.
8:30 Taps.

This means that 8¾ hours are devoted to farm labor. All of the routine work about the camp, except the cooking and washing of dishes, is also done by the boys, who in turn take time off from the work in the fields for this purpose. The boys receive free board and are allowed $1.00 a week for spending money. The project is cooperative in nature; the same group of boys will be employed during the entire season (until the first or middle of October), and any profits remaining after the initial outlay

is met will be divided among the recruits.

The camp itself is situated on the fair grounds and the fair buildings are used for headquarters. One is fitted up as a dormitory in which the boys sleep; another contains offices and an auditorium; others are equipped for use as wash rooms, a "first aid" hospital, a cooperative camp store and a savings bank. Adequate recreational facilities have also been provided with a baseball field, a running track, three tennis courts, and swimming pool at the disposal of the Club. Lectures, motion, picture entertainments and occasional concerts are being planned.

The members of this Club are chiefly the sons of moneyed people who have given up their usual summer holidays in the mountains or at the shore to be of assistance in the present crisis. Having had no previous farm experience, the work at times seems hard, but the spirit of camaraderie which exists is like that of a summer vacation camp and the group is doing everything in its power to make the venture a success.

The second plan, that of establishing a central camp at which the boys live and from which they go out daily to farmers in the vicinity, is less successful. An attempt of this sort has been made at Bernardsville and conditions there illustrate the difficulties which are met. Fifty-two boys, most of whom are sixteen years or over, are quartered in the high-school building. They receive $20 a month and board, and the farmers pay to those in charge $1.80 for each day of service received. The daily program is similar to that of the Froh-Heim Club, the boys being required to be at their place of work at 7 A.M. and returning to the camp at 5:30 P.M. The chief criticism of this project arises from the fact that it was initiated before adequate inquiry was made as to the demand for boy labor. The boys are there, 50 of them, excused from attending school that they may help with the crops; a camp is also there, the high school having been closed two weeks early to facilitate the use of the building for this purpose, but at the time of the writer's visit there was no farm work to be done. The farmers do not feel that inexperienced city boys can give them service worth $1.80 a day and as a result many of the boys are working on the estates, mowing lawns, pruning trees and trimming shrubs—praiseworthy tasks, to be sure, but hardly a proper substitute for school work. When the camp was visited eight boys were working on the city roads, pulling out weeds. This work was only temporary, of course, "to keep the boys busy until farm work could be found," but it does not increase food production; nor does it appeal to boys who have left school with the distinct idea of serving their country.

Most of the boys who have gone out, however, are working on individual farms, either for their parents or relatives, or "hired out" to others. The chief danger in this work arises from the lack of proper supervision. Often no preliminary investigation is made and there is no means of preventing exploitation. The possibilities of overwork and underpay are illustrated by the case of a fifteen-year-old boy found working on a truck farm in Hunterdon county. He was slight in build, weighing only 113 pounds and with no previous farm experience; nevertheless, he works from 5 in the morning until 8 at night, with about an hour and a half off at noon, doing chores and picking strawberries. For these tasks he received, in addition to his board, $2 a month, the equivalent of $.002 an hour.

The New Jersey Department of Public Instruction deserves credit for the promptness with which it responded to the call for help and for the comprehensiveness of the system which they set in motion in so short a time. But the very speed with which the work was organized, before the situation

was sufficiently understood, is responsible for certain undesirable features. Other communities which undertake similar work this fall and summer may profit by their experience and take the measures necessary to safeguard the children. Three points should be borne in mind:

1. Boys should be excused only for certain kinds of work in which their assistance is necessitated by the present situation. The immediate response of the boys in New Jersey when the plan was suggested to them was not balanced by an equally eager response on the part of the farmers, with the result that many of the boys either could find no work in the district to which they were sent or were employed by farmers whose interest was not primarily to increase the amount of production but to reduce the labor cost and increase their own profits. For many years agencies interested in the establishment of high educational standards as well as those working for the abolition of child labor have been trying to prevent children from entering school late and leaving school before the end of the term in order to help on the farm. In many cases of boys working on their own farms, the creation of the Junior Industrial Army has served merely to legalize a practise that has long existed in violation of the compulsory education law. The only sane and wise policy is to restrict the work done by the school boys to that which is of value, not to the farmers who welcome the opportunity to secure cheap labor, but to the nation.

2. Great care must be taken that all requirements are complied with in the case of each recruit. In New Jersey in the first rush of enthusiasm this was neglected. In spite of the fact that it was distinctly stated that no boys under fourteen years should be excused, an examination of 539 record cards at the state office showed twenty children under fourteen, chiefly boys in the southern part of the state, working on their home farms. Nor does the county superintendent keep in touch with all of the boys after they have secured work. In one county, six boys working on individual farms were visited, and of these three had either changed their work or dropped it entirely without the knowledge or consent of the county superintendent. When this is possible there is, of course, no assurance that all the boys who are out of school are actually working. Some girls also have been excused for farm work, chiefly, though not always, on their parents' farms. Special supervision should be given to the conditions under which they work.

3. The work should not be done at the expense of the children's education. This should be made the most important qualification for the work, but in New Jersey it is apparently not considered. No restriction as to the school grade or the quality of the work done by the child is imposed. Children over fourteen in a low grade, often the very ones most in need of school training, may leave and become even further retarded. That the tendency in this direction is strong, is shown by the following table, based on the records of 561 children:

NUMBER OF CHILDREN LEAVING SCHOOL—BY AGE AND GRADE

	Grades									
	4th	5th	6th	7th	8th	9th	10th	11th	12th	Total
12 years.....			1	1	1					3
13 "	1	5	1	4	5	1				17
14 "	3	18	42	41	58	24	14	2		202
15 "	4	10	23	19	63	26	30	6	1	182
16 "	1	1	6	6	20	27	40	26	8	135
Total.....	9	34	73	71	147	78	84	34	9	539

Grade unknown 9
Vocational school with different grading 13

This means that 54 per cent. of these children leaving school for farm work are below the grade in which children of their

age should be. Thirty-nine per cent. are in the normal grade and 6.1 per cent. above grade. How many of these children in their normal grade are doing satisfactory work is unknown. The opinion of several of the farmers interviewed, however, was that many of the children left school, not because of a desire to work, but of a dislike for school. "I know a boy," said one farmer, "who was expelled a month ago, and when this chance came along they took him back on trial. It helped him a lot, for he's not in school and so can't get in trouble."

The granting of school credit under these circumstances is open to abuse. One county superintendent stated that no boys were allowed to go out whose work was not up to grade, but the general policy seems to be to allow any boys to go who wish to, and if their work is below grade, to "give them the benefit of the doubt." "This helps a lot of boys to graduate," one farmer sagely remarked.

In the long run the boys of the nation can contribute more if educational standards are maintained and they are fitted to recognize and prepare for the duties of citizenship. Farm work is not necessarily inconsistent with this, for there can be little objection to able boys whose work is up to grade spending part of their time on the farm if they have had sufficient experience to make this work of value or are to work under adequate direction. The work of the Froh-Heim Club, for example, where work and recreation are combined, the hours not too long, living conditions good, and training in farm work given, is ideal. But even such employment should not be a substitute for education, but rather an extension of it for those whose capacities for usefulness will be increased through such activity. Patriotism too often tends to the spectacular. Those who have jurisdiction over the farm work of the boys in various states must bear in mind that fundamentally the most patriotic policy is that which in the long run secures from each individual the service which he is best equipped to give and which provides training necessary to enable him to perform that service efficiently.

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EDUCATIONAL EVENTS

GRADUATE STUDENTS AT THE UNIVERSITY OF IOWA

AN example of the rôle played by graduate study in American colleges and universities today is afforded in the report of the dean of the graduate college at the State University of Iowa on the enrollment during the first term of the summer session, six weeks in length. It is shown in this report that, of the total enrollment of 711, 308 had already received degrees from colleges. One hundred and forty of the 308 graduate students were candidates for the master's degrees, 57 for doctor's degrees, and 111 were working for no additional degree.

Majors in education during the summer session were almost three times as numerous as majors in any other branch, there being 71 who were specializing in this field. English was second with 27, and chemistry, physics, psychology and history followed, with numbers less 15. German led French in the number of majors, but the interest in French, probably because of our alliance with France in the war, was never so great before.

Seventy-seven colleges and universities, situated in practically every state in the United States, in Canada, in Europe and even in China, were represented in this comparatively small body of students. The following shows the number of students who are graduates of the university itself, of all Iowa institutions and of institutions outside of Iowa:

Number from the university	142
Number from other institutions in Iowa	93
Number from institutions outside of Iowa	73

The representation of students of graduate standing in Iowa's summer session is proof that the day is no more when college men and women assume a self-complacent air upon the acquisition of their first degree. These persons are looking about them and seeing a multitude of other men and women equally well prepared to go out into the world to teach the coming generation or to become absorbed in the business and professional world. They are realizing that leadership in all types of endeavor to-day is in the hands of men and women who have best prepared themselves by study. The proportion of graduate students to the undergraduates at the middle-west institution makes it clear that college beyond the first degree is assuming a new importance in American colleges and universities.

VOCATIONAL TRAINING FOR DISABLED SOLDIERS

The National Society for the Promotion of Industrial Education reports that a Red Cross Institute for crippled soldiers and sailors to train the permanently crippled to become self-supporting is announced by the War Council of the American Red Cross. The use of the building together with $50,000 was contributed by Mr. Jeremiah Milbank to start the experiment in New York City.

Dr. Edward T. Devine, director of the School of Philanthropy, Dr. Douglas C. McMurtrie, editor of the *American Journal of Care for Cripples*, and Mr. Charles H. Winslow, of the National Society for the Promotion of Industrial Education, visited the schools for training crippled soldiers in Canada, and those of England and France will be visited when possible.

Opportunities for vocational readjustment in American industries and occupations and what types of training should be offered must be discovered from a study of American conditions. The vocational opportunities for cripples are being studied through the readjustments of some 500 men who have been crippled by accidents within the past two years. The experience of the public and private employment bureaus in placing the handicapped, and of industries which have been able to use cripples, will also throw light on this difficult problem.

Dr. Devine met with the National Society Conference group of State Administrators of Vocational Education on July 13 to discuss methods of administration and of vocational training for cripples. Similar conferences will be held with employers, representatives of labor and social workers. A committee representing all interests will be appointed to develop the experiment of vocational training for disabled soldiers. The results of these conferences, studies and experiments, will be submitted to the War Department as a contribution from this committee.

Educators and administrators of vocational education throughout the country will watch this experiment with great interest, for the adaptation of vocational training to the man who has been crippled in war or in industry is a new problem in the United States. New organizations and private hospitals for the training of the disabled soldiers are already springing up in many parts of the country. Intelligent administration is essential to their success and to their existence. Canada, after several years' experience, has abolished the small private hospital for the returned soldiers.

THE GARY PLAN IN NEW YORK CITY

Mr. William G. Willcox, president of the board of education, has written to Dr. John H. Finley, New York state commissioner of education, asking that the matter of school organization for New York City by the duplicate system—the Gary plan—be given a full investigation and hearing before a commission whose decision all fair-minded citizens would accept. Dr. Finley has replied that his request for an investigation will be granted. He wrote that the state will start a survey of school systems in two other cities on September 1, and will begin in New York as soon as those tasks are finished or sooner if investigators can be obtained.

In his letter Mr. Willcox says:

> The duplicate organization is supported as the best practicable method of extending throughout the elementary schools the advantages afforded by

playgrounds, gymnasiums, auditoriums, workshops, science laboratories, kitchens, libraries, art studies and similar opportunities for physical training, for teaching of handicraft, and for developing observation, judgment and imagination.

It is opposed on the ground that the children will be so tired by physical exercises that they will be unable to give proper attention to their mental work, and that the diversity of activities will interfere with the progress of the pupils in reading, writing, arithmetic and other academic subjects. It is advocated on the ground that the varied activities of such a school stimulate increased zest and interest, cultivate initiative, resourcefulness, and ambition, and promote the largest possible development of all the powers and faculties of the child.

It is opposed on the ground that such "fads and fancies" have no place in a public-school curriculum. It is advocated on the ground that training in handicraft is an important part of a well rounded education for any sphere of life. It is opposed on the theory that such training tends to confine children to industrial pursuits and deny them the opportunity of becoming proficient in the arts, sciences and professions.

These are some of the conflicting views which are strenuously urged for and against the duplicate plan. Such controversy is manifestly detrimental to the harmonious progress of our great school system and your department is the obvious source from which to expect an impartial judgment upon the merits of the question. The board of education, as you are aware, seeks only the highest welfare of the school children. If, in the opinion of any impartial and competent body, the duplicate school plan as applied to our New York schools is fairly open to any of the objections urged against it, the board of education should have the benefit of such criticism.

EXAMINATIONS IN ENGLISH

THOUGH examinations share with text-books the responsibility of determining in very large measure the character of American education, yet little attempt has been made to standardize them. There will be general interest, therefore, in the announcement that a definite and systematic investigation has been authorized by the executive committee of the National Council of Teachers of English to determine the extent that examinations in English as set by teachers and various educational authorities are a handicap to the progress of American schools. The committee responsible for this undertaking has prepared to conduct a thoroughgoing inquiry into practises with reference to examinations in English in the elementary schools, the junior and senior high schools, the junior colleges, and in normal schools, colleges and universities. The committee expects to study data obtained from teachers, publishers and educational authorities, and to test the current practises of examiners in the light of present-day educational needs. A study will be made of the psychological basis of questioning and examining. Considerable thought will be given to the formulation of a philosophy of examining in English studies, and to the determination of definite objectives in testing the results of teaching. The committee is constituted as follows: C. C. Certain, Cass Technical High School, Detroit, Michigan, *chairman;* W. N. Otto, Shortridge High School, Indianapolis, Indiana; William Hawley Davis, Bowdoin College, Brunswick, Maine; H. G. Paul, University of Illinois, Urbana, Illinois; A. H. Krug, Baltimore City College, Baltimore, Maryland; O. B. Staples, University High School, Baton Rouge, Louisiana; Ellen Garrigues, DeWitt Clinton High School, New York City; C. N. Greenough, Harvard University, Cambridge, Massachusetts; George Coffman, University of Montana, Missoula, Montana; Lela Douthart, High School, Kansas City, Kansas; John D. Mahoney, Boys' High School, West Philadelphia, Pa.; F. C. Oakes, State Normal School, Edmond, Oklahoma; W. S. Hinchman, Groton School, Groton, Massachusetts; Eleanor Sheldon, Oshkosh Normal School, Oshkosh, Wisconsin; J. R. Brumm, University of Michigan, Ann Arbor, Michigan; H. R. Steeves, Columbia University, New York City; Clark Northrup, Cornell University, Ithaca, New York; W. E. Vaughn, Normal School, Memphis, Tennessee; A. B. Noble, Iowa State College, Ames, Ia.; Charles R. Gaston, Richmond Hill High School, New York City.

EDUCATIONAL NOTES AND NEWS

DR. CHARLES ALLEN PROSSER, director of the William Hood Dunwoody Institute in Min-

neapolis, has been requested by the Federal Board for Vocational Education to accept the position of director of vocational education for six months beginning on August 15. Dr. Prosser has accepted and has been given leave of absence by the trustees of the institute.

ALFRED L. HALL-QUEST, for three years professor of secondary education in the University of Virginia, has become head of the Cincinnati College for Teachers and inspector of high schools.

DR. JOHN M. BREWER, of Harvard University, has been appointed head of the Department of Education of the Los Angeles Teachers' College.

MISS FLORENCE K. ROOT, head of the Department of Latin, Smith College, has been elected dean of the Pennsylvania College for Women, Pittsburgh, succeeding Miss Cora Helen Coolidge, resigned.

A. R. SPAID, who has been superintendent of schools in Dorchester County, Maryland, has been appointed Commissioner of Education for Delaware, to succeed Charles A. Wagner.

BURR W. TORREYSON, formerly professor of secondary education for the Arkansas State Board, has been elected president of the State Normal School at Conway, Ark., to succeed J. J. Doyne.

ARTHUR F. PAYNE, assistant professor of Manual Arts at the Bradley Polytechnic Institute, Peoria, Illinois, has been appointed to the newly established position of director of vocational education at Johnstown, Pa.

EDWARD L. HARRIS, one of the assistant superintendents of the Cleveland schools, has been appointed principal of the Central High School.

CLARENCE N. FLOOD, superintendent of schools in Bath, Me., has been elected superintendent of the Saugus public schools.

WILLIAM F. SIMS, of Saugus, Mass., has been elected superintendent of schools of Webster and Dudley, Mass.

H. H. BAISH, for the past nine years superintendent of the Altoona (Pa.) public schools, has resigned. For eleven years previous to his election to the superintendency, he was employed in the schools of that city. Superintendent Baish had also been president of the Pennsylvania State Educational Association.

THE following committee has been appointed to report on a school program for the state of Florida: Superintendent G. W. Tedder, of Madison county; Superintendent G. I. Metcalf, of Palm Beach county; Superintendent H. J. Dame, of Citrus county; Principal H. Clay Marks, of Daytona; Principal George Lynch, of Arcadia; J. W. Allen, of Pinellas county board; J. H. Baisden, of Osceola county board.

THE Ellen H. Richards Memorial Fellowship, offered jointly by the trustees of the memorial fund and the University of Chicago, has been awarded to Minna C. Denton, B.S., and A.M., Michigan University. Miss Denton's teaching experience at Milwaukee, Downer College, Lewis Institute and Ohio State University has been supplemented with research work as fellow in physiology of the University of Chicago and various scientific papers. She is at present at work on a problem in Food Conservation, viz., Alternations in Nutritive Value of Vegetable Foods due to Boiling and Canning. The fellowship carries a stipend of $500 and tuition fees for the year 1917–18.

DR. HOLLIS BURKE FRISSELL, for many years principal of the Hampton Normal and Agricultural Institute at Hampton, Va., died suddenly on August 6, at Whitefield, N. H., where he was passing the summer. Hollis Burke Frissell was born in Amenia, N. Y., on July 14, 1851. He spent three years at Phillips Andover Academy, going from there to Yale, where he was graduated with the class of 1874. He subsequently graduated from the Union Theological Seminary, and in 1880 became chaplain of the Hampton Institute. It was in 1893 that he became principal, and in this important office he devoted all his time and energy to the upbuilding of the school and the problems of the education and betterment of the negro race.

MAJOR W. L. GRANT, of Kingston University, Ontario, who is now with the Canadian

forces at Hythe, has been offered the principalship of Upper Canada College, Toronto, in succession to Principal Auden.

MR. O. H. LACE, M.A. (Corpus Christi College, Oxford), of King Edward VII. School, Sheffield, has been appointed out of 65 applicants to the headmastership of Tewkesbury Grammar School.

DISCUSSION AND CORRESPONDENCE

A COMPARISON OF THE EFFICIENCY OF SLOW AND RAPID READERS

IN SCHOOL AND SOCIETY for November 25, 1916, the writer reported the results of two experiments with ninety-four university students to determine the relative efficiency of the rapid and slow readers as measured by an immediate memory test over what had been read. The conclusions of these experiments agreed in revealing a slight negative correlation between rate of reading and quality when measured in this way.

In the spring of 1917 two other similar experiments were carried out with similar groups of students. These experiments were conducted and the results computed by Messrs. P. McClennehan and H. F. Martin, graduate students in the college of education of the State University of Iowa. The results of their studies are here reported for comparison with the first study.

The first experiment was undertaken with seventy-four juniors and seniors, mostly women, the material read being the article from SCHOOL AND SOCIETY, Vol. II., p. 806, entitled "Public Education the First Line of National Defense." This article is the same as the one used in one of the experiments previously reported and the same test questions were submitted to the students in this group as were used before. None of the students had previously read this article. Following exactly the same method of administering the test and of grading the results it was found that the correlation between speed of reading and accuracy as tested by immediate memory for what was read was — .27. (This coefficient was computed by the Pearson formula adapted to rank differences.) Moreover the lowest fourth in speed had an average percentage of accuracy of 67 and a median accuracy of 71. The fastest fourth of the readers attained an average accuracy of 60 and a median of 61. The second quarter in speed had an average accuracy of 54 and the third quarter, *i. e.*, the next to the lowest quarter in speed, averaged 64 per cent. in accuracy. This experiment thus shows a still more decided inverse correlation between speed and accuracy than was found in the first use of this article as reported last November. The coefficient there reported was — .07.

The second test, this spring, was given to seventy-five junior and senior students, practically all of whom had participated in the preceding tests. The material of the test was the article in SCHOOL AND SOCIETY, Vol. V., p. 189, entitled "Madame Necker de Saussure, a Neglected Pioneer," by Miss Winifred Rich. The method of the experiment was identical with that of the preceding tests, but for convenience it is here recounted in detail.

Each member of the class was provided with a copy of the article and instructed to begin the reading at a given signal. They were cautioned to read as nearly as possible at their natural rates and with careful attention to the content of the article. They were told they would be asked to answer a series of fact questions based on the reading, but that no one would be held responsible for questions on the article relating to subject matter beyond the amount he had read. It was also understood that their answers to the questions would not affect their class grades. The members of the three classes participating responded heartily and in every case turned in carefully prepared answers to the mimeographed questions submitted to them. All the work was done in the regular class period of 50 minutes. At the signal all began the reading and when the first two of each class had finished all were asked to stop. Each student then counted the number of columns and lines he had read and recorded it at the top of his sheets of questions. The questions were forty-two, referring to specific facts in the

article. Seventy-two points were involved in the questions. The marking was very close, an answer being regarded as either right or wrong.

The median percentage of accuracy of these students was 45.8; the 75 percentile mark was 58.8 and the 25 percentile was 36.2. The upper quartile as to rate included all students who had read not less than 10 columns and 14 lines. The lowest quartile included all who read not more than 7 columns and 3 lines.

Of the 19 rapid readers, 5 equalled or exceeded the median accuracy of the group, and only 2 equalled or exceeded the 75 percentile mark. Of the 19 slow readers, 14 equalled or exceeded the median accuracy of the whole group and 9 exceeded the 75 percentile mark.

The average percentage of accuracy of the fastest quartile was 41.8 and of the slowest quartile was 53.

Using Pearson's rank difference formula, the coefficient of correlation between rate of reading and accuracy of recall was computed and was found to be —.47. The results of these experiments thus completely corroborate the findings of the earlier experiments, namely, that in this sort of a test the rapid reader is considerably less efficient than the slow reader as measured by ability to answer accurately questions of fact over what has just been read.

IRVING KING

UNIVERSITY OF IOWA

QUOTATIONS

CHILDREN AND LABOR IN ENGLAND

MR. FISHER'S reply last week to a deputation of the Committee on Wage-earning Children was sympathetic and not merely a common-form shelving of the issue. The deputation, which was introduced by Mr. H. J. Tennant, and included Miss Adler, Mr. T. E. Harvey and Lord Henry Cavendish-Bentinck, asked for legislation restricting the labor of school children out of school hours. The extent of the evil was indicated by the deputation, but it is doubtful if even the educational public know how widespread and deleterious it is. On October 5, 1915, we pointed out that nearly half a million children between the ages of twelve and fourteen years were receiving no education or no education worth having, and that all of these were at work which led nowhither at the very age when their moral and physical development is at stake. Since then the conditions which we condemned have passed from bad to worse. Many thousands of children under the age of twelve, under the ages even of ten and eleven, are at work, and willingly at work, since the younger the child the more readily it responds to the demand for helpfulness. Mr. Fisher can not but realize the evil of this exploitation of young children by parents and tradesmen. It is an evil affecting not only the efficiency of school life, but our whole economic system. There never was an economic need for this child labor, and the Board of Education admitted in their Circular [1007] to local authorities last week that there is no economic need in rural districts for such labor even now. This circular was a letter from the National Service Department and dealt with the pressure on education authorities in rural areas to release boys and girls under twelve for service on the land. The letter definitely states that, in view of the labor released from the Army and the number of women now available, "it would appear that there should be no necessity for such a serious interruption as is contemplated of the education of the nation's children."

This should suffice to determine the policy of the rural education authorities. But the position in towns is even more urgent, and Mr. Fisher and the government might give additional powers to local authorities to deal with the labor of children in full-time school attendance. It was certainly a mistake in the legislation of 1903 to make it possible for the street trading of such children to receive official recognition. But street trading is not the chief cause of anxiety. Another is the employment of little children by shopkeepers and distributing agencies before school, in the dinner interval, and after school. The local authorities should be empowered to forbid all employment for wages of children under twelve and to restrict within very narrow limits the employment of children at school

under fourteen. The Report of the Conference on Juvenile Employment which was issued last Saturday and is summarized in another column deals with the question of the employment for wages of children in full-time school attendance. We are told that a heated discussion took place on the subject, and that it was necessary to take a vote, with the result that there was a majority of thirty in favor of total prohibition. But this majority in favor of total prohibition shows that the end is not in doubt. We are satisfied to leave the matter in all cases after the war to local decision. Public opinion is rapidly forming and will be reflected on local bodies.

Naturally Mr. Fisher must not overburden or imperil his bill, or interfere with the labor necessary for the war. He can not be expected to change the face of England in a moment. But he can strike deep without disturbing the organization of society. He can transform from below by ameliorating the conditions of very young children. The country is ready now for changes that seemed Utopian two years ago. By means of nursery schools the nation is dealing at last with the raw material that is to be the England of to-morrow. The same principle should be followed in the case of children between the ages of six and twelve years. The physical welfare of these children is of the first importance. Yet between these ages thousands, through the carrying of heavy weights and other means of overstrain, are receiving lifelong physical injury. All efforts for educational reform are being balked by their employment. The elaborate scheme of the Half-Time Council, which was reported in our last issue, depends, as indeed practically all of the reform schemes and Mr. Fisher's own proposals depend, on the physical efficiency of the children. The Birmingham Education Committee propose to appeal to the child's own choice by the provision of play centers for elementary school children out of school hours. But the children, at any rate of London, have at present no choice, and the local authorities have no scope to give them the freedom that is needed for reasonable recreation. The matter is, of course, difficult, and slow progress may be the best progress. But it is dangerous to allow difficulties to accumulate. The deputation from the Committee on Wage-earning Children asked that provision should be made for the education of children abnormally employed during the war. The best and only effective provision is to check the increase of this class; but, unhappily, the returns prepared by the Half-Time Council show a steady increase in the number of half-timers, and this would seem to indicate that abnormal employment is also extending. How the government propose to deal with this difficulty remains to be seen, but if young children are still to be employed by the government or by controlled firms it is all the more necessary that employment during full-time attendance should be abolished by the local authorities.—London *Times Educational Supplement*.

BOOKS AND LITERATURE

Education After the War. By J. H. BADLEY. New York, Longmans, Green and Co. 1917.

Advocates and opponents of conscription and military training alike will be interested in the plan offered in this book of preparation for national service. The author most sanely points out what is to be avoided in this training and offers a positive program which he places in relation to a general scheme of education covering all periods of life.

> From the very beginnings of education, in the nursery and the infant school, up to the university, we need to reconsider our methods and our aims, and to see that, instead of going on contentedly along the old happy-go-lucky ways, trusting to "national characteristics" to pull us through all difficulties, and to bring us to the top and keep us there, we are giving our children what they will need to fit them to take their part in the new world and new conditions that will arise out of the war, and to help to shape these better than the old. We have seen, by the example of Germany, what education can do to mould an entire nation and to direct its energies towards a goal set before it. That in the case of Germany this goal was one disastrous in the end for the nation, and a menace to the world, does not make the example less noteworthy.

The scheme proposed calls for full time schooling until sixteen and part time for two additional years. There is especial attention given to the necessity of considering individual and social differences without their being allowed to justify an early specialization which is bound to be harmful in its results.

Especial consideration is given to the increased interest in coeducation of the sexes in which the author's school has been doing pioneer work for a quarter of a century. This school, Bedales, located at Petersfield, in Hampshire, is the most successful of the group of "new schools" which had their beginning in Dr. Reddie's "Abbotsholme" and which have had wide influence throughout the continent of Europe. Among the most conspicuous of them have been the Deutsche Landerziehungsheime of Dr. Lietz in various parts of Germany and L'École des Roches founded in Normandy by Edmond Demolins to demonstrate to the French the reasons for "Anglo-Saxon Superiority."

Bedales has shown that classical and humanistic studies have a real place in an education which is directly concerned with practical affairs and efficient vocational training and that both are consonant with an active, healthy, out-of-door life in which art interests and individual tastes have due consideration.

In addition to his own experimental school Mr. Badley is active in the development of the Workers' Educational Association. This experience gives especial interest to those parts of his plan which have to do with the education of workingmen.

He does not hesitate to affirm that the last two years have proved that England has the resources to justify expenditure necessary for anything that she really wants.

FRANK A. MANNY

EDUCATIONAL RESEARCH AND STATISTICS

A STUDY OF 880 CHILDREN IN BLOOMINGTON, IND., TESTED BY BINET SCALE

A STUDY of the results of the Binet-Goddard scale given to a group of 880 unselected pupils of the Bloomington, Ind., public schools, reveals some interesting facts in connection with the scale, as well as some significant comparisons with the results of Terman's study in the use of the Stanford revision of the Binet scale, with 1,000 unselected pupils.[1]

In the first place, in comparing the results of the Bloomington tests with the probability curve, we are led to believe that the test is a fairly accurate index to the child's intelligence. The 880 children tested were of all grades and of all schools, so that they afford a very fair representation of the entire school population of Bloomington. We find the comparison of the results of the Bloomington tests with the probability curve like this:

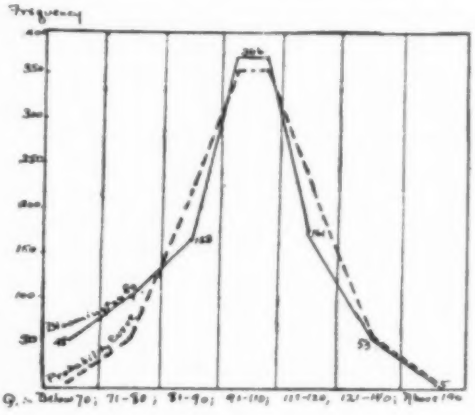

FIG. 1.

The preponderance of border-line cases and feeble-mindedness in the Bloomington study, as compared with the probability curve, can be accounted for in the social status of a large number of those tested.

About half of the 880 pupils tested were from the McCalla School, a school as representative in every way as it would be possible to find. The distribution of intelligence quotients here approaches more nearly the probability curve, and also the distribution found by Terman, as we shall see later. Practically fifty per cent. of these children are

[1] L. M. Terman, "The Measurement of Intelligence" (Houghton, Mifflin).

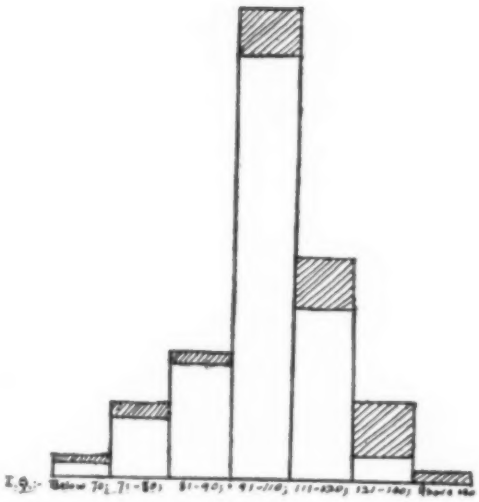

FIG. 2.

found in the normal group, that is with intelligence quotient of 91 to 110. The median intelligence quotient is very clearly 100. In the chart of the intelligence quotient distribution of McCalla School, the shaded portion of each column represents the pupils who, according to their mental age, are either beyond or below the grade they should be in. The unshaded portions show the children in the grade normal to their mental age.

A study of the medians of intelligence quotient further bears out the accuracy of the scale. In Grades I.–VI. the median I.Q. was found by grades, and in each case, with the exception of the fifth grade, the median I.Q. was 100. In the fifth grade the median dropped to I.Q. 91. Nothing was found in the tests to indicate a reason for the drop in this grade, but the drop does not put the median out of the normal group.

In the medians by chronological age, the results were not so uniform. Here we find the following:

Chron. Age	Median I.Q.
6	116
7	100
8	100
9	100
10	100
11	91
12	83

The medians by schools, and of a group of defective children, as well as a group of pupils selected at random (not included in the other groups) of all ages, grade and schools, are as follows:

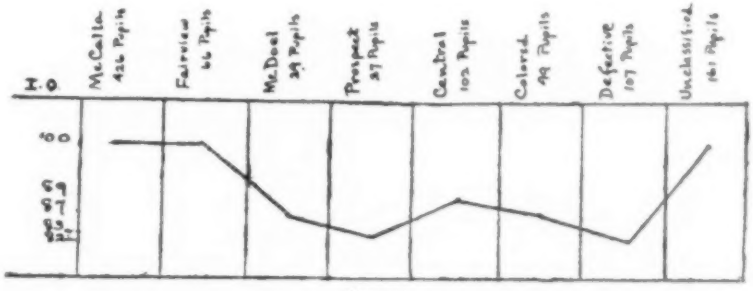

FIG. 3.

The high median I.Q. for the six-year-olds only 34 per cent. of the Bloomington pupils seems to indicate that the tests for the lower ages in the scale are a little easier than they should be. This is in line with Terman's criticism of Goddard's arrangement of the Binet scale. The low medians for the eleven- and twelve-year-olds may be due to the small number of these ages in the groups tested, which would not be a fair representation.

In comparing results of the Bloomington study with the results Terman found with his 1,000 unselected pupils, tested with the Stanford revision of the Binet Scale, we find a larger number of Terman's group in the middle grades, while Bloomington results, taken altogether, have greater percentages in both extremes. Counting I.Q. 92–108 as normal, here,

(to conform to Terman's grouping) we find normal, as against 50 per cent. in Terman's study. The following two charts give a closer comparison of the results obtained by Terman with the Stanford revision and the results obtained in Bloomington with the Goddard scale.

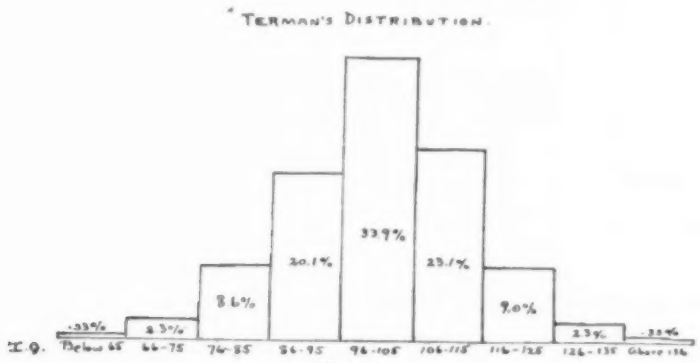

FIG. 4.

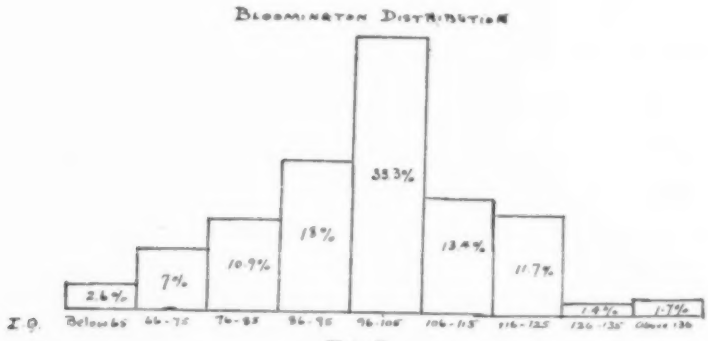

FIG. 5.

It will be noted that the additional 14 per cent. which Terman got in his normal group must have been mostly from those with I.Q. 106–108, as the group having an I.Q. of 96–105 is approximately the same in both studies.

In a study of the distribution of mental age by school grade, we find that 74.3 per cent. of the pupils are in the grade for which their mental age would indicate them suited, 12.3 per cent. were farther along in school than they should have been by mental age standards, while 13.4 per cent. were being held back in grades lower than their mental ability would place them. In this distribution we allowed a range of two years for each grade, not having data as to whether the child was in the first or second semester's work of the grade. Children in the first grade with mental ages of six and seven were considered correctly located; in the second grade with mental ages of seven and eight; and so on.

The distribution for the entire group by grades was as follows:

Grade	Correctly Located, Per Cent.	Mentally Too Young, Per Cent.	Mentally Too Old, Per Cent.
I.....	77.3	3.2	19 5
II.....	87.3	5.3	6.9
III.....	63.0	5.4	31.6
IV.....	71.2	11.0	17.8
V.....	70.9	27.7	1.4
VI.....	88.9	9.3	1.8
VII.....	56.7	41.2	2.1
VIII.....	80.0	20.0	

Our conclusions from this study lead us to believe that the individual mental tests can be

largely used in determining the fitness or unfitness of the child for promotion from one grade to another. Not only is it an accurate index to the child's mental ability, but it will, even if necessary for the child to skip a grade or two, put the bright pupil in the grade in which his mentality places him, and will put back more effectively, and for the greater efficiency of the work of each grade, the mentally slow pupil. Individual differences can be more accurately noted through the system of individual mental tests than through the ordinary system of grading.

The tests on which this study is based were given in Bloomington, Ind., under the direction of Professor E. E. Jones, then of the University of Indiana, now head of the department of Education of Northwestern University.

WILLIAM I. LACY
EVANSTON, ILL.

SOCIETIES AND MEETINGS

THE NATIONAL EDUCATION ASSOCIATION

THE DEPARTMENT OF SCHOOL ADMINISTRATION

Address of Welcome.—O. M. PLUMMER, member board of education, Portland, Ore. When a board of education, after much consideration and investigation, selects a superintendent for its system, its work is half done. When it puts in the balance of the time letting him alone and looking to him for administrative results, its work is well-nigh complete. Ninety-five per cent. of the trouble between school-board members and their administrative head is caused by the question of patronage. The old-fashioned idea which still obtains in some quarters is that the main duty of the school director is to provide places as teachers for his relatives and friends. It is apparently a question of a few years, however, until this idea will have become a thing of the past and school-baord people will confine themselves purely to the larger policies of the entire system, allowing the details to be worked out by the proper heads. No man should be on a board of education who has not a great love for children. If he has every other qualification and lacks this one he is bound to be a failure. No office within the gift of the people carries with it so much honor as that which goes with a member of the board of education. The School Administration Department of the National Education Department can be made one of the strongest departments of the entire association. If more school people could be brought to attend these national gatherings there would soon be a more general understanding by them of the problems of their administrative offices. They would also be brought in touch with the rank and file of teachers from all over the country, thereby getting a much broader viewpoint and be able to treat the various problems in a more sympathetic manner.

The necessity of the adaption of the building to the school organization.—S. A. CHALLMAN, state commissioner of school buildings, Minneapolis, Minn. All schools, whether elementary or high school, in order to meet the requirements of to-day, must provide not only for the intellectual needs, but also for the physical development and the industrial training of the children as well as the social activities of the community. This implies for elementary schools, not only class rooms and wardrobes, but also playrooms or gymnasiums, which may also be used for community purposes, kindergartens, lunch rooms, showers, swimming pools, open-air rooms and in each case a nurse's room, a principal's office and a library. For the high school, it means not only study rooms, recitation rooms and laboratories, but also shops, rooms for home economics, cafeterias, commercial departments, art departments, music rooms, auditoriums, gymnasiums, and other rooms for recreation purposes. To provide in each case the most convenient interior arrangement with a proper amount of floor space for the number of pupils who can most advantageously occupy the rooms at the same time is a task of no mean proportion. But when added to this the architect must also adapt the plans to some particular form of school organization, the special problems which arise complicate the situation. In view of the extensive educational program to which we are committed and the limited financial appropriation to which we are generally restricted, the adjustment

which must necessarily be made taxes the ingenuity of every conscientious architect.

The university as the conservator of national ideals.—WILLIAM T. FOSTER, president of Reed College. The war thrusts upon the nation the need of furnishing ideals as well as armaments. Armies and navies and aeroplanes alone can not make the world safe for democracy. As democracy is a body of ideals, its last citadel of refuge from the enemy must be an institution dedicated to the conservation of ideals. Such an institution is the university. Thousands of the noblest young men of America are now on their way from the universities to the front trenches of the fight for ideals. Some of them will never return. That will be a loss beyond the power of imagination; but it will be a greater tragedy if, while they are dying at the front, we who stay behind fail to do our part in making the world safe for democracy. We shall fail unless our schools and universities are made safe places for continuing—even under stress of war—to inculcate the ideals for which we went to war. For what shall it profit us if we gain the whole world for democracy and thereby lose the soul of democracy? There is always danger, through the bitterness and sacrifice of conflict, of falling to lower planes, of doing violence to the very ideals that we started out to exalt and defend. "We are told," said Mr. Ponsonby in the House of Commons, "that we are fighting for liberty and democracy against tyranny. But gradually we have seen the very system we abominate, whose existence we detest, instituted in our midst and in setting out to destroy it in the enemy we are creating it at home." The danger is no less in America. We have declared, again and again, by the most solemn official utterances, that we have undertaken a war for the ideals of freedom, freedom under the law, freedom from tyranny, freedom from injury without due process of law, freedom from autocratic power, freedom of the seas, freedom to the seas, freedom of small nations to live their lives without fear of subjugation, freedom in the pursuit of truth. We have declared that our purposes are humanitarian, free from the suspicion of selfishness, that we ask no spoils of war, no conquest of land nor monopolies of trade; in short, that we ask nothing for ourselves that we do not ask for all mankind. It is the function of the university, as the conservator of ideals, to keep the vision of these, our noblest national aspirations, unblurred; for where there is no such vision, the people perish.

Standardization of school building.—WILLIAM B. ITTNER, St. Louis, Mo. Economic pressure, produced by the conditions of war, should not cause curtailment in the necessary school or public building operations, but it should check the wanton extravagance and the inefficiency of much of the building of the past, and force an application of scientific principles to building procedure. Postponement of necessary school and public building at present will but lead to an accumulation of problems for the future. Perhaps it is not generally known that foreign countries, involved in war, have not abandoned building operations. On the other hand, they are planning bigger, better, and more efficient public building for the welfare of the people than ever before, and the entire scheme of educational, social, and recreational facilities is being made more scientific, more unified, and comprehensive. If foreign countries, with depleted resources, find it necessary to carry on extraordinary building plans, after a period of war, is there not all the more reason why we in America, with all our prosperity and unlimited resources, should work out our problems in as fully a scientific and comprehensive a manner, and especially so for our schools, upon which rest the very foundations of our government, and which are of the greatest importance to the success of the country. As an example of the influence of scientific planning in connection with public utilities upon a nation's strength, we have only to look to Germany, where an application of scientific principles in educational, commercial, and public welfare has long been the rule and has made that country almost invincible in its fight for the domination of the world.